

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A route information transmitting method ~~being characterized in that~~ comprising:
~~a transmitting side provides a receiving side which requests route information with compressed data obtained by arithmetically processing position data of a plurality of points aligned along a route so as to convert the position data into statistically biased data and variable length coding the statistically biased data so converted, and in that~~ to obtain compressed data at the transmitting side;
transmitting the compressed data from the transmitting side to a receiving side; and
~~the receiving side identifies the route by decoding the compressed data so as to restore the position data~~ at the receiving side.

Claim 2 (currently amended): ~~A~~The route information transmitting method according to Claim 1, ~~characterized in that~~ further comprising:
requesting, from the receiving side ~~indicates to~~ the transmitting side ~~a current point and a destination so as to request,~~ route information to the destination by indicating a current point and a destination; and in that

~~the transmitting side calculates~~ calculating the
route to the destination and ~~provides the receiving side~~
with obtaining the compressed data ~~regarding the route on~~
the basis of the calculated route at the transmitting side.

Claim 3 (currently amended): ~~A~~The route information
transmitting method according to Claim 1, ~~characterized in~~
~~that~~ further comprising:

requesting, from the receiving side requests to the
transmitting side, information on a traveling path ~~by with~~
designating a range; and ~~in that~~

~~the transmitting side extract~~extracting a traveling
path which falls within the range from past traveling path
information stored ~~therein and provides the receiving side~~
with in the transmitting side and obtaining the compressed
data ~~regarding on the basis of the~~ extracted traveling path
at the transmitting side.

Claim 4 (currently amended): ~~A~~The route information
transmitting method according to Claim 1, ~~characterized in~~
~~that:~~ wherein the transmitting side obtains the compressed
data by ~~performing~~ implementing an equidistance re-sampling
on the route, representing position data of ~~an obtained a~~
sampling point by a deviation angle and variable length
coding the deviation angle.

Claim 5 (currently amended): ~~A~~The route information transmitting method according to Claim 1, ~~characterized in that: wherein~~ the transmitting side obtains the compressed data by ~~performing~~ implementing an equidistance re-sampling on the route, representing position data of ~~an obtained a~~ sampling point by a deviation-angle estimated difference value and variable length coding the deviation-angle estimated difference value.

Claim 6 (currently amended): ~~A~~The route information transmitting method according to ~~any of Claims 1 to 5,~~ ~~characterized in that~~ Claim 1 further comprising:

~~the receiving side performs~~performing a matching with digital map data held in a device ~~thereof of the receiving side~~ using the restored position data so as to identify an object road on the digital map data ~~held in the device thereof~~ at the receiving side.

Claim 7 (currently amended): A route information providing apparatus ~~being characterized by~~ comprising:

~~receiving means for receiving~~a receiver the receives a request for information on a route;

~~encoding means for producing compressed data by performing an arithmetic treatment on~~an encoder that arithmetically processes position data of a plurality of points aligned along ~~the~~ a route so as to convert the

position data into statistically biased data and variable length ~~coding the data, and codes~~ the statistically biased data to obtain compressed data

~~transmitting means for providing a transmitter that~~
transmits the compressed data.

Claim 8 (currently amended): ~~A~~The route information providing apparatus according to Claim 7, ~~characterized by comprising further comprising:~~

~~route calculating means for calculating a route~~
calculator that calculates a route to a destination based on information on a current point and the destination which is received by the ~~receiving means, and characterized in that, receiver,~~

~~the encoding means wherein the encoder produces the compressed data regarding based on the route calculated by the route calculating means calculator.~~

Claim 9 (currently amended): ~~A~~The route information providing apparatus according to Claim 7, ~~characterized by comprising further comprising:~~

~~storing means for receiving and storing a storage that~~
receives and stores information on a traveling path; and

~~running route information extracting means a traveling~~
route information extractor for extracting a traveling path which falls within a designated range received by the

~~receiving means~~ receiver from traveling path stored in the
~~storing means; and characterized in that, storage,~~
~~the encoding means~~ wherein the encoder produces the
compressed data ~~regarding~~ based on the traveling path
extracted by the ~~running traveling route~~ extracting means
extractor.

Claim 10 (currently amended): A route information
receiving apparatus ~~being characterized by~~ comprising:

~~transmitting means for requesting~~ a transmitter that
requests information on a route;

~~receiving means for receiving~~ a receiver that receives
compressed data ~~provided~~ in which position data of a
plurality of points aligned along the route is compressed;
and

a compressed data ~~decoding means for restoring~~ decoder
that restores the position data of ~~a~~ the plurality of
points ~~aligned along the route~~ by decoding the compressed
data.

Claim 11 (currently amended): ~~A~~ The route information
receiving apparatus according to Claim 10, ~~characterized in~~
~~that, wherein~~ information on a current point and a
destination is transmitted from the ~~transmitting means~~
transmitter, a matching with a digital map is performed
using the position data restored from the compressed data

~~provided~~, and the route is identified on the digital map, so that a route from the current point to the destination is identified.

Claim 12 (currently amended): A route information receiving apparatus ~~according to~~ as set forth in Claim 10, ~~characterized in that:~~ wherein information designating a range is transmitted from the ~~transmitting means~~ transmitter, a matching with a digital map is performed using the position data restored from the compressed data ~~provided~~, and the route is identified on the digital map, so that a traveling path falling within the range is identified.

Claim 13 (currently amended): A route information receiving apparatus according to Claim 10, ~~characterized by~~ comprising further comprising:

a map matching means for performing unit that performs a matching with a digital map using the position data restored by the compressed data ~~decoding means~~ decoder so as to identify the route on the digital map.

Claim 14 (currently amended): A route information receiving apparatus according to Claim 13, ~~characterized in that:~~ wherein,

~~the transmitting means~~ transmitter transmits

information on a current point and a destination[;], ~~and-in~~
~~that~~

the map matching ~~means further~~ unit identifies a route
from the current point to the destination.

Claim 15 (currently amended): A route information
receiving apparatus according to Claim 13, ~~characterized in~~
~~that: wherein~~

the ~~transmitting~~ ~~means~~ transmitter transmits
information designating a range[;], ~~and-in that~~

the map matching ~~means further~~ unit identifies a
traveling path falling within the range.